

# PUBLIC HEALTH



LONDON: THE SOCIETY OF MEDICAL OFFICERS OF HEALTH  
Tavistock House South, Tavistock Square, W.C.1

No. 2.-Vol. LXVI.

MONTHLY PRICE 2s. 6d.  
ANNUAL SUBSCRIPTION 31s. 6d.

NOVEMBER-1952

## Protective Foods in Infant Feeding

The protective foods are known to be important in infant feeding, and certain investigations carried out some years ago demonstrated that a good supply of B vitamins in the ante-natal diet benefited both the mothers and their babies. Marmite yeast extract was used in these experiments and since then it has been recommended to an increasing extent as a source of B vitamins.

Marmite can be given to babies from six weeks onwards and in some cases doctors order it to be given from birth. It is often said to be of great value for infants that are not thriving. For babies up to six months a scrape of Marmite on the tip of a spoon can be added to the feed or given in 2 tablespoonfuls of water between feeds.

Obtainable from Chemists and Grocers  
Special terms for packs for hospitals, welfare centres and schools

Literature for distribution at welfare centres is available on request from:—

The Medical Department  
**THE MARMITE FOOD EXTRACT CO. LTD.**  
Walsingham House,  
35 Seething Lane, London, E.C.3.

### MARMITE yeast extract

contains

RIBOFLAVIN (vitamin B<sub>2</sub>) 1.5 mg. per oz.

NIACIN (nicotinic acid) 16.5 mg. per oz.

P.H.5211

Throughout the Country  
**FAILING LACTATION**  
is being replaced by  
**SUCCESSFUL BREASTFEEDING**  
with the aid of

**LACTAGOL**  
THE GALACTAGOGUE

Samples for clinical trial and specially reduced prices from Infant Welfare Dept., Lactagol Ltd., Mitcham



When a child is learning to play a musical instrument he is appalled by the enormous number of "wrong" notes. He is mystified to understand why his teacher can play "right" notes, apparently without effort.

If he practises hard and is in the hands of a good teacher, his fingers, at first clumsy and faltering, become confident and accurate.

Similarly, a mother is dependent on her Medical Adviser for guidance in the feeding of her first born.

Such guidance will, of course, be directed to breast feeding whenever practicable. In case of artificial foods the advice will be based on the doctor's personal preference, founded on experience.

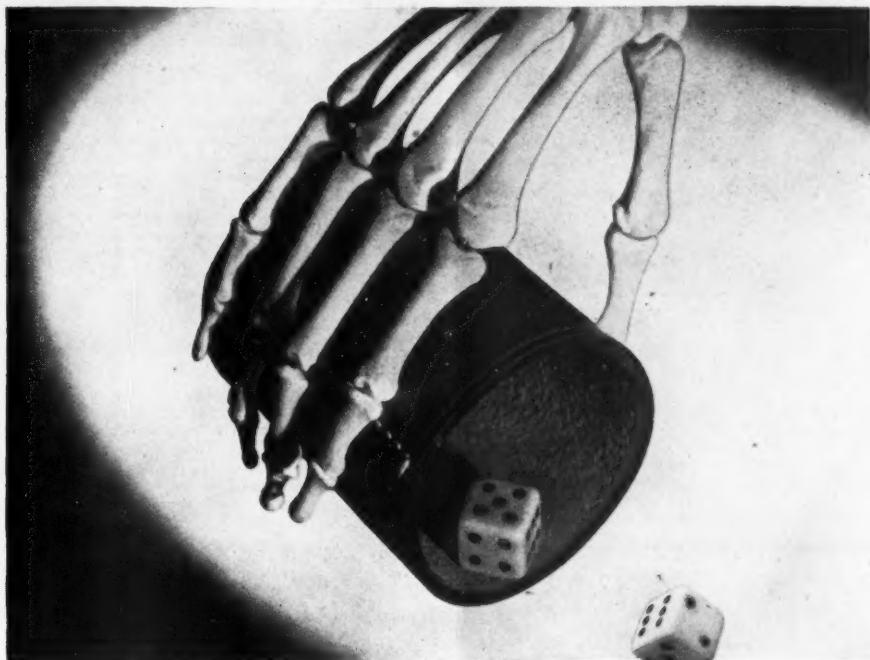
We are very gratified that so many doctors have used our foods successfully in the past and continue to recommend them. This is undoubtedly due in large measure to the consistently high standard of quality which has always been our aim and which remains unaltered.

4950

**COW & GATE MILK FOODS**

Guildford, Surrey

**THIS ADVERTISEMENT appears in leading food trade journals. It is inserted here for the information of those concerned with public health.**



## *Do you dice with Death?*



For that is exactly what you are doing if there is the slightest chance of food in your shop being touched with dirty hands.

And not your death either! One pair of dirty hands can spread food poisoning throughout an entire town — *and it happens, week after week.*

Don't take chances. An Ascot instantaneous gas water heater will give you instant and ENDLESS hot water at really low

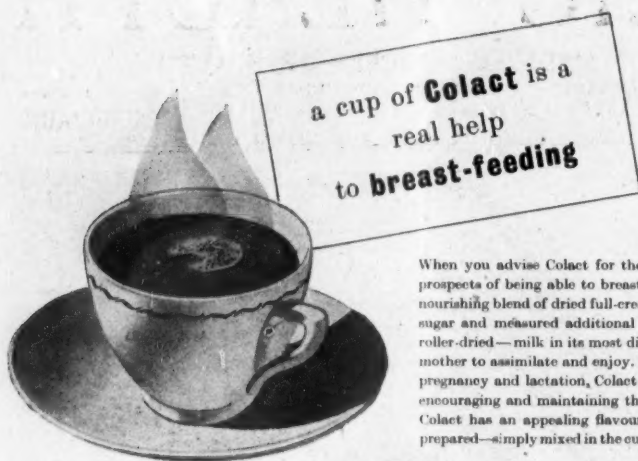
cost. There is an Ascot for every purpose and they are very easy to install. See the Ascot heaters at your nearest gas showrooms.

—and talking of installing:

"If it is difficult to wash the hands, the average worker will not take the trouble. Please see, therefore, that your excellent water heaters are placed in the right place".

—A doctor at the Gas Service Conference, London, March, 1952.

ASCOT GAS WATER  HEATERS LIMITED  
43 PARK STREET • LONDON W1 TELEPHONE GROSVENOR 4491



When you advise Colact for the mother, you brighten her prospects of being able to breast-feed her baby. Colact is a nourishing blend of dried full-cream milk, cocoa, refined cane sugar and measured additional vitamin D. Its rich milk is roller-dried—milk in its most digestible form, ready for the mother to assimilate and enjoy. Taken regularly throughout pregnancy and lactation, Colact is of practical assistance in encouraging and maintaining the flow of good breast milk. Colact has an appealing flavour and is quickly and easily prepared—simply mixed in the cup with water just off the boil.

**COLACT**

Trade mark

Issued in 1-lb. tins

Special terms to Welfare Authorities

GLAXO LABORATORIES LIMITED, GREENFORD, MIDDLESEX BYRON 3434

#### PLEASE...

Encourage mothers to sterilize babies' feeding bottles and teats, and so combat cross infection that is the cause of so much infant sickness and diarrhoea.

The Milton method of continuous sterilization is used by so many hospitals and clinics nowadays. It leaves no taste in bottles, teats or feed.

For full particulars write to the Chief Bacteriologist, Milton Antiseptic Limited, John Milton House, London, N.7.



ENCOURAGE CONTINUOUS STERILIZATION OF

FEEDING BOTTLES AND TEATS WITH

**MILTON**

# PUBLIC HEALTH

SOCIETY OF MEDICAL OFFICERS OF HEALTH

Telephone: EUSTON 3923

TAVISTOCK HOUSE, TAVISTOCK SQUARE, LONDON, W.C.1

Telegrams: Epidaurus, Westcent

No. 2. Vol. LXVI

NOVEMBER, 1952

## CONTENTS

	PAGE		PAGE
<b>EDITORIAL</b>		<b>BOOK REVIEWS</b>	
Four Years After	15	The Control of Communicable Diseases (H. Paul)	23
The Association of County Medical Officers	15	The Child in Health and Disease (ed. C. G. Grulee)	24
<b>SPECIAL ARTICLES</b>		The Advance to Social Medicine (R. Sand)	24
Prevention—Medical and Economic		The Life and Times of Sir Edwin Chadwick (S. E. Finer)	24
Presidential Address. By Andrew Topping, T.D., M.A., M.D., F.R.C.P., F.R.S.E., D.P.H.	16	The British Dental Annual, 1952 (ed. E. Sprawson)	24
Sanitary Plumbing Practice in the U.S.A. By A. H. Zimmerman, Maj. U.S.A.F.	18	<b>NEWS AND REPORTS</b>	
Occupational Health in Australia—Symposium. By Prof. E. Ford, Dr. C. J. Cummins and Dr. G. Smith	31	Estimate of Future Births	26
<b>CORRESPONDENCE</b>		The Role of G.P.s in the Health Service	26
Validity of Evidence of Cancer Control (M. Donaldson)	23	<b>SOCIETY OF MEDICAL OFFICERS OF HEALTH</b>	
Public Health (Aircraft) Regulations Amendment (F. A. Belam and W. G. Booth)	26	Notices	
Exclusion from School and Nurseries of Contacts of Infectious Disease (J. L. Burn)	26	Annual General Meeting	25
		School Health Service Group	27
		East Anglian Branch	28
		Home Counties Branch	28
		North-Western M.C.W. and S.H.S. Sub-groups	28
		Official Notice	
		City and County of Bristol	28

## EDITORIAL

### Four Years After

1952 has been a year of reflection and comment on the progress of the National Health Service. We have had Dr. Frangcon Roberts' classic examination of the financial implications of medical progress, Dr. Osler L. Peterson's objective report on all branches of the Service to the Rockefeller Foundation and the useful report on co-operation by a special committee of the Central Health Services Council. The latest publication is perhaps the most valuable because it retraces the various stages in British thought and policy since the 19th century, which led up to the passing of the 1946 Act. This book, by Sir James Stirling Ross\* is a remarkable achievement, coming as it does from a man whose main career was not connected with the central departments which have to do with health or local government services. Yet the clear grasp which it shows of the development and working of the health services is a tribute to the type of trained mind and character which are selected for the Civil Service.

It is the presence of these qualities which make the author's views as to the position of the Medical Officer of Health the more encouraging from our point of view. Sir James has no doubt where the M.O.H. comes into the picture. Referring to the annual reports, he says that they "can be an intimate record of the physical and mental welfare of the people. Whatever change there has been in the system or functions of the Local Health Authorities, there stands the ineffaceable picture of the local health organisation covering every parish in the country in its mandate to keep the people healthy." Later, in a passage on the functions and powers of local authorities for health and welfare, he writes: "The total positive effect of these powers in health can ultimately be much greater than the work of the hospitals, essential as that is and pre-eminent in its sphere." Such words, coming not from one of our own protagonists but from a detached observer, are indeed encouraging. Of the Medical Officer of Health he says: "The title has stood for a great conception and a great reality." He considers that "for any organised community large enough for the purpose, with unestablished range and character of its own, there shall be some responsible person adequately staffed who, under the authority of his governing Council, has as his definite concern the health of that community as a whole." Whilst not suggesting that the M.O.H.

should carry the whole responsibility for it, Sir James thinks that he should be the "Chief Staff Officer" for health of the whole local community.

The author gives descriptions of studies and reports made between the wars, of the determination of national health, 1939-43, of the general plan, 1943-46, and of the organising of the service, 1946-48, which will stand historians of our time in good stead, as will his chapter on the service in action, 1948-51.

In Part VIII he turns to the future questions of policy and practice now arising. In discussing reconciliation of finance and policy, Sir James writes:—

The factors in any development of health policy are, of course, not static; neither the liabilities in types of ill-health and in incidence of illness nor the advance of medical science. But one general trend, it is submitted, should be approved in principle and encouraged, both for prevention and economy, which go hand in hand. The cheapest and best of health measures is prevention, whether absolute prevention or prevention by treatment in early stages. The next is treatment in the home for all cases which lend themselves to it, and the enhancement of the general practitioner will in itself greatly enlarge the range of home treatment. The third is treatment in hospital, where again the methods of hospital treatment, as the doctors teach us, can be developed in a way to bring a most valuable asset of power and economy. If it is said that this is common form, let it be registered that it is common form to establish the fashion of thinking and as a test of every new development.

We trust that this liberal and objective study will be widely read in the circles where policy is formed.

### The Association of County Medical Officers

We congratulate the Association of County Medical Officers of Health of England and Wales on reaching its jubilee on October 31st, 1952, and on the useful service which it has done for public health, particularly as the medical advisory body of the County Councils Association. In another incarnation, so to speak, the individual members of the Association also form the County Medical Officers of Health Group of our own Society, and in that capacity likewise are a valued source of consultation on county problems.

The jubilee occasion was very fully and happily celebrated 50 years to a day after the first meeting and dinner convened by the late Dr. J. R. Kaye, County Medical Officer of the West Riding, in Birmingham. On the present occasion, the newly installed President, Dr. G. W. H. Townsend, presided at a large meeting of members and many former County M.O.H.s at the Middlesex Guildhall, who heard a most thoughtful address (which we hope to

\* The National Health Service in Great Britain. (Pp. 398. Price 30s. net.) London: Geoffrey Cumberlege, Oxford University Press. 1952.



reproduce in this journal) by Dr. Ffrangcon Roberts. Thereafter, the members adjourned to the London School of Hygiene and Tropical Medicine, where a distinguished former member, Prof. J. M. Mackintosh, gave a fascinating account, illustrated by photographs and exhibits, of the founder members and the early doings of the Association. The final event of a memorable day was a jubilee dinner, also at the London School, when the toast of the Association was proposed by Mr. G. L. C. Elliston, who described County M.O.s as the landed gentry of the Public Health Service; Dr. Townsend wittily replied. Dr. H. Kenneth Cowan then gave a hearty welcome to the guests, for whom Mr. W. L. Dacey, Secretary of the C.C.A., cordially responded.

### PREVENTION—MEDICAL AND ECONOMIC\*

By ANDREW TOPPING, T.D., M.A., M.D., F.R.C.P., F.R.S.E., D.P.H.,  
Dean, The London School of Hygiene and Tropical Medicine

I am proud, although somewhat chastened, at the thought that I am the 72nd President of this venerable and famous Society which goes back to 1856; in four years it will celebrate its centenary. In that period there have been many illustrious names on the roll of Presidents, Sir John Simon, formerly Medical Officer of Health for the City of London, and at the time of his presidency, 1856-61, Medical Officer to the Privy Council, being the first. There have been many others whose names are very well known, and others who are not so familiar and have no particular claim to fame apart from the fact that they have all been selected by their fellow-members, which in itself goes to prove that they must have had some outstanding quality. I have enquired as to any research that is being carried out to ensure that the Presidential Addresses of the past are to remain available for future Presidents and others, and I am reminded that the records of the first 50 years have been written up in the Jubilee Number of PUBLIC HEALTH published in 1906, and that Dr. Walton, of Newcastle-upon-Tyne, is preparing a follow-up history of the subsequent years to the present day for the Centenary Celebrations. Dr. G. F. Buchan was President in 1925-26 and I am happy that he is able to be with us to-day. Of the subsequent 25 Presidents, 17 are still alive, which would go to suggest that as a class they are fairly long-lived, and that probably applies also to Medical Officers of Health too. In view of some remarks I hope to make later on, this latter fact may not be altogether a good thing.

In the first 60 years of our Society the Presidents were engaged in the practice of old-time preventive medicine and dealt with the particular needs of their time—improvement of water supplies, sanitation and the control of infectious diseases. Thereafter, in the years just before and just after the first World War, there were very great changes, brought about by the development of Local Authorities and personal health services, provisions of hospitals and dispensaries, ante-natal services and so on, and there accrued a number of members of the Society who were not Medical Officers of Health. From this growing section there arose considerable justifiable criticism when I joined the Society some 30 years ago. It is very important, in my opinion, that more of the junior medical officers should be able to attend meetings of the Society and I think that medical officers of health should persuade their local authorities that it would be of service to the work of their areas if the junior staff were allowed to do so, that is to say, that they should be given the necessary time off from their duties and encouraged to take a more active part in the work of the Society. There are, I understand,

a number of those attending the present School Medical Officers' Course who are not members of the Society, who have expressed complete approval with the arrangements made, and I would like to take this opportunity to say that there is to be a change in the name of the Society which will go a long way towards enabling them to become members, and meet some of the objections that have been made to the present constitution. The new title for which the Council will seek the members' approval is "The Society of Preventive Medicine." There has been only one Departmental Medical Officer who has been President—the late Dr. Ernest Ward, a well-remembered tuberculosis officer. Dr. E. H. T. Nash was President as an M.O.H. but most of his work and interests were in Child Welfare.

The Presidential Addresses of most of my predecessors have dealt, quite understandably, with the changes in public health and what was going to happen to it in the future. In thinking the matter over, I find that I have some attributes in which I appear to be unique: the first, that I appear to be the first graduate of Aberdeen University ever to be called to this office, and this surprises me when I think of the Aberdonians who have been famous in the public health field; I have heard it said that it is probably because the post is entirely honorary and carries no salary whatsoever. Secondly, I am the first President who has had, as a distinct part of his job, a close association with tropical medicine; and lastly, I am the third President to have held an academic post in the public health field, the other two having been H. R. Kenwood and R. M. F. Picken.

### The Finance of Health

As an Aberdonian, it is appropriate that I should first deal with the subject of finance. For generations we have been preaching that prevention of disease, largely by removing the conditions which conduce to it, is not only the logical approach but is also very much less expensive than curative efforts. I have talked on this subject on many occasions and from all sorts of pulpits but not yet, as was suggested in a recent editorial in *The Medical Officer*, from a soap box at Marble Arch. With each succeeding year the costs of curative medicine have been soaring and there seems to be no limit. Patients suffering from illnesses which are avoidable, and could be cured quite easily, are encouraged to go to the hospital and to the specialist. Local authorities say that prevention is the thing we have to concentrate on, but no one is doing it. We all remember perfectly well Hugh Paul's illustration of the cost of curing the blue baby which will never be a normal child and to how much better use that money could be put in saving the life of innumerable children by preventive measures, by improvements in environment, working conditions, etc. The same applies to tuberculosis: much of the money being spent on sanatoria could be used so much more effectively in educating the people on the prevention of tuberculosis, by telling them what they are doing which causes many more cases than ever are due to Koch's bacillus. Then there is the expenditure on prematurity. Speaking without expert knowledge but from my own experience many years ago, I am convinced that a large proportion of cases of prematurity is due to inadequate ante-natal care and unwillingness to follow instructions. The modern prematurity unit is most expensive. The right thing to do is to educate the public and so stop the large number of these cases that are occurring. Bradford Hill and his team of workers issued a very important report on an investigation on the possible relation of smoking to the large increase in lung cancer. The publicity given to it was negligible and it is appalling to see the number of adolescents in cinemas and other public places smoking continuously for want of a concentrated effort to educate them in the possible result; no, it is easier to order another deep therapy unit at a colossal cost!

We do not get much help in this matter either from the general practitioner or the consultant branch of the

\* Presidential Address to the Society of Medical Officers of Health, London, September 17th, 1952.

profession. There may, however, be an answer to the whole question of cost and that is in the present financial position of the country: we cannot afford these high costs and there may be a swing towards prevention as being the cheaper expedient, but it is a pity that this may be forced on us by the financial situation rather than by conviction.

### Training in Preventive Medicine

Most medical schools, with some of the most renowned providing glaring exceptions, have improved the quality and the quantity of their undergraduate teaching, but there is still a long way to go. Here again there is often little more than lip service paid by the clinical teachers, some going so far as to say that there is little need for extension and that the subject need no longer be included in the qualifying examination. The doctor who is not fully cognisant of the part played by avoidable factors in lessening health, mental and bodily, is not competent to pull his full weight as a family doctor or as a specialist. The glamour of clinical work with its great rewards in personal satisfaction and gratitude of the patient must always have a great appeal. Success in preventive work may and usually does confer much greater benefit to the community and the individuals who compose it but it is rarely spectacular and has little news value. The teacher of Preventive Medicine, be he a full-time professor or the M.O.H. of the University town, will never be able to exercise full influence on the student mind unless he has the co-operation of the clinicians, all of whose teaching should stress the social factors which have conducted to or caused the disease and which if not recognised and removed or minimised will make their curative effects palliative and temporary. The teaching of preventive medicine should be done in the ward or, as in Edinburgh, where they have established a wonderful system and teach it in the homes of the patients, thus making the clinical and social picture one. Until we can get the teachers really interested the student will continue to look upon Preventive Medicine as a subsidiary subject to the big three. Habits, environment, occupation, population trends are most important to the medical student if he is to serve mankind and help the public to understand how they can prevent ill-health.

### Tropical Medicine and Malthus

Apart from some experience in most European countries, some of them by our standards backward, I have had several opportunities of visiting our West African Colonies. There, only in greater degree, the same problems face us as in this country: housing is disgraceful, avoidable illness—insect and water-borne—is rampant, the cloud of ignorance about disease is even thicker, the status of the witch doctor who knows "all the answers" is higher than that of the man whose only claim is that his efforts will prevent disease. The authorities *have* to provide curative facilities—dispensaries, clinics and hospitals, to meet public demand. Obviously, such services are necessary but they should be looked upon as only a token to gain the confidence of the people and to prepare them for a rapid extension of the preventive services which would cut off 90 per cent. of the disease at the source. It appears so obvious that full priority should be given to the improvement of nutrition, to the provision of decent water supply, to the clearance of the bush areas in which the tsetse breed, to drainage of the mosquito breeding grounds and to education of the people in the real causes of the majority of their endemic diseases: even more important than any of these is improvement in agricultural methods and their general economy.

Nature is a very wise old mother and her ecological control has through the ages contrived to strike a balance between food and population. That her methods are cruel cannot be denied, but we must think very carefully

before we upset her balance; the last result may well be worse than the first if we, by our efforts, interfere with the natural laws of selection and survival without taking prior steps to ensure at least equal changes in the level of food supplies. There are two schools of thought: one holds that by reducing infant mortality and by eradicating the endemic diseases the resulting larger and healthier population will be able to produce more food; the other claims that until better methods of agriculture, with great enrichment of the soil and better seed, are adopted, improvement in yield is impossible in most of the areas in question and therefore we should postpone major health measures with their inevitable population increase until the various countries have shown that the extra mouths can, in fact, be fed.

I realise that I am arguing in a circle and that, however justifiable by cold logic the policy of withholding the benefits of modern preventive knowledge may be, we must continue and, indeed, accelerate our efforts to raise the health standards in those backward countries. But may I make a strong plea that improvement in general economy, in education and in agriculture must at least accompany, if it cannot precede, these measures.

### Quantity and Quality

In our own country the greatest problem facing us is the steadily growing proportion of old people to young. The spectacular reduction in the infantile mortality rate coupled with a greatly increased expectation of life, due partly to the former and partly to the achievements of the scientists with their ever-growing number of life-saving and prolonging drugs, has already made a significant change in age-group distribution. When, as is inevitable, they produce something which will even further delay the onset of degenerative conditions of the cardiovascular system and when, as is also certain, the exact exciting cause of the various malignant diseases is pinpointed, the tag that in 20 years' time we will have too many people in bath-chairs and too few to push them will be a gross under-statement. Failing voluntary or compulsory euthanasia or a great increase in the birth-rate, this disproportion will increase by geometrical progression. I do not expect that the birth-rate will in fact show any material change; the distressing feature is that far too large a percentage of the births are occurring in the lower strata of the population and usually to the most careless and irresponsible: the thinking section of all grades, especially in the middle classes—by far the most important group—are producing far too few children and this, I submit, largely irrespective of their religious beliefs. Birth control is an unfortunate title with its implication of restraint; family advice, which has been suggested as an alternative, is colourless although it has the germ of the idea. We as a body interested in Public Health in its widest sense should, I think, do all we can to impress upon the powers that be and the thinking part of the community that more children born to the right type of parents are one of the country's greatest needs.

---

Dr. J. Greenwood Wilson, Medical Officer of Health, Cardiff, has been elected an Honorary Fellow of the American Public Health Association.

Professor W. M. Frazer, D.B.E., M.D., D.P.H., Medical Officer of Health, City of Liverpool, has accepted an invitation from the University of London to give the Newsholme Lectures—three in number—during 1954. These lectures on Social Welfare and Public Health were instituted under the will of the late Sir Arthur Newsholme, K.C.B., Chief Medical Officer to the Local Government Board from 1908 to 1919. The lectures were given by Sir Henry Cohen, M.D., LL.D., in 1950, in 1951 by Professor Dugald Baird, M.D., F.R.C.O.G., Regius Professor of Midwifery, Aberdeen University, and in 1952 by Sir Edward Mellanby, G.B.E., K.C.B., formerly Secretary to the Medical Research Council.

# SANITARY PLUMBING PRACTICE IN THE U.S.A.\*

By ALEXANDER H. ZIMMERMAN, Maj. U.S.A.F. (M.S.C.),  
Sanitary and Industrial Hygiene Engineer,  
Office of the Air Surgeon, U.S. Air Force in Europe.

I am indeed honoured by your kind invitation to appear before the Society of Medical Officers of Health. Before delving into the subject of my talk I should like to refer to a definition of sanitation as formulated by the National Sanitation Foundation: "Sanitation is a way of life. It is the quality of living that is expressed in the clean home, the clean farm, the clean business and industry, the clean neighbourhood, the clean community. Being a way of life it must come from within the people; it is nourished by knowledge and grows as an obligation and an ideal in human relations."

Plumbing has been considered by many authorities as one of the most important links in the chain of modern sanitation practices. There is also evidence that the rulers of the civilisations of ancient Egypt, Greece and Rome advocated sanitary facilities of one kind or another.

The term "plumbing" is taken from the Latin word *plumbum*, meaning "lead." An individual who worked in the field of sanitation in ancient Rome was called a *plumbarius* because his work consisted of shaping lead. While time has gone on, the art of plumbing, which has a background of thousands of years, actually has made the greatest progress only in the period subsequent to 1910. To-day, plumbing is considered to include the practice, materials and fixtures used in the installation, maintenance, extension and alteration of all piping, fixtures, appliances, and appurtenances in connection with any of the following: sanitary drainage or storm drainage facilities, the venting system and the public or private water-supply systems within or adjacent to any building, structure, or conveyance; also the practice and materials used in the installation, maintenance, extension, or alteration of the storm-sewer, liquid-waste, or sewage, and water supply systems of any premises to their connection with any point of public disposal or other acceptable terminal.

The basic principles of plumbing design criteria and regulations have been set forth in the basic goals in environmental sanitation. Properly designed, installed and maintained plumbing systems are essential to maintaining a suitable health environment for man. While the details of plumbing construction may vary, the basic sanitary principles, having for their purpose the protection of the health of the people, are the same regardless of the geographic location where humans may reside. The Report of the Co-ordinating Committee for a National Plumbing Code, as issued jointly by the U.S. Department of Commerce and the Housing and Home Finance Agency, has listed therein a series of basic principles. While those principles are not considered as all-inclusive for the purpose of being embodied in legal codes or regulations, they do serve to define the intent. The following are some of the principles as set forth in the publication:—

"Principle No. 1: All premises intended for human habitation, occupancy, or use shall be provided with a supply of pure and wholesome water, neither connected with unsafe water supplies nor subject to the hazards of backflow or back-siphonage."

"Principle No. 2: Plumbing fixtures, devices, and appurtenances shall be supplied with water in sufficient volume and at pressures adequate to enable them to function satisfactorily and without undue noise under all normal conditions of use."

"Principle No. 3: Plumbing shall be designed and adjusted to use the minimum quantity of water consistent with proper performance and cleaning."

"Principle No. 4: Devices for heating and storing water shall be so designed and installed as to prevent dangers from explosion through overheating."

"Principle No. 5: Every building having plumbing fixtures installed and intended for human habitation, occupancy, or use on premises abutting on a street, alley, or easement in which there is a public sewer shall have a connection with the sewer."

"Principle No. 6: Each family dwelling unit on premises abutting on a sewer or with a private sewage-disposal system shall have, at least, one water closet and one kitchen type sink. It is further recommended that a lavatory and bathtub or shower shall be installed to meet the basic requirements of sanitation and personal hygiene."

"All other structures for human occupancy or use on premises abutting on a sewer or with a private sewage-disposal system shall have adequate sanitary facilities but in no case less than one water closet and one other fixture for cleansing purposes."

"Principle No. 7: Plumbing fixtures shall be made of smooth non-absorbent material, shall be free from concealed fouling surfaces, and shall be located in ventilated enclosures."

"Principle No. 8: The drainage system shall be designed, constructed and maintained so as to guard against fouling, deposit of solids, and clogging, and with adequate cleanouts so arranged that the pipes may be readily cleaned."

"Principle No. 9: The piping of the plumbing system shall be of durable material, free from defective workmanship and so designed and constructed as to give satisfactory service for its reasonable expected life."

"Principle No. 10: Each fixture directly connected to the drainage system shall be equipped with a water-seal trap."

"Principle No. 11: The drainage system shall be designed to provide an adequate circulation of air in all pipes with no danger of siphonage, aspiration, or forcing of trap seals under conditions of ordinary use."

"Principle No. 12: Each vent terminal shall extend to the outer air and be so installed as to minimise the possibilities of clogging and the return of foul air to the building."

"Principle No. 13: The plumbing system shall be subjected to such tests as will effectively disclose all leaks and defects in the work."

"Principle No. 14: No substance which will clog the pipes, produce explosive mixtures, destroy the pipes or their joints, or interfere unduly with the sewage-disposal process shall be allowed to enter the building drainage system."

"Principle No. 15: Proper protection shall be provided to prevent contamination of food, water, sterile goods, and similar materials by backflow of sewage. When necessary, the fixture, device, or appliance shall be connected indirectly with the building drainage system."

"Principle No. 16: No water closet shall be located in a room or compartment which is not properly lighted and ventilated."

"Principle No. 17: If water closets or other plumbing fixtures are installed in buildings where there is no sewer within a reasonable distance, suitable provision shall be made for disposing of the building sewage by some accepted method of sewage treatment and disposal."

"Principle No. 18: Where a plumbing drainage system may be subjected to backflow of sewage, suitable provision shall be made to prevent its overflow in the building."

"Principle No. 19: Plumbing systems shall be maintained in a sanitary and serviceable condition."

"Principle No. 20: All plumbing fixtures shall be so installed with regard to spacing as to be reasonably accessible for their intended use."

"Principle No. 21: Plumbing shall be installed with due regard to preservation of the strength of structural members and prevention of damage to walls and other surfaces through fixture usage."

"Principle No. 22: Sewage or other waste, from a plumbing system which may be deleterious to surface or subsurface waters shall not be discharged into the ground or into any waterway unless it has first been rendered innocuous through subjection to some acceptable form of treatment."

While it is impossible at this time to consider in detail all the various good practice criteria and design features so necessary to good plumbing, I will discuss some of the important basic aspects. Before discussing these criteria, let us consider the definition of a plumbing system, which is as follows: the plumbing system of a building includes the water supply distribution pipes; the fixtures and fixture traps; the soil; waste and vent pipes; the building (house) drain, and building (house) sewer; and the storm drainage pipes with their devices, appurtenances and connections, all within or adjacent to the building.

Present-day buildings are large and plumbing installations are becoming increasingly complex. In many localities plumbing work is under some form of governmental control, State or local, and is given close supervision. Legal codes or regulations have been adopted whereby the subject of plumbing design criteria and standards, methods, plumb-

\* A paper read to the Metropolitan Branch, Society of M.O.H., London, September 12th, 1952.



ing fixtures and types of materials which may be used, installation standards and methods and final operating tests are specifically spelled out. In order to ensure that only qualified persons engage in plumbing practices, systems of apprentice training and licensing of plumbers have been established in many localities. Another method of control has been the establishment of requirements that before any general plumbing alterations or new plumbing installations are made, plans must be submitted for examination and approval by legally authorised governmental agencies. In the event such plans indicate that the proposed designs are in conformance with the code or regulations, a permit is issued for the work to proceed. The progress of the work is checked at intervals to ensure code compliance and a final test is made before the systems are approved. These procedures give a considerable degree of protection to the general public and are a strong force in preventing the so-called "handy man" from doing plumbing. In many instances where disease outbreaks have been traced to contaminated water supplies, the occurrences were due to faulty plumbing designs and installations made by incompetent persons who had little or no knowledge of safe plumbing practices.

Various laboratories, including those operated by governmental agencies, have been set up for testing actual installations, plumbing fixtures, appliances and appurtenances to eliminate the possibility of contaminating water supply distribution systems through the use of improperly designed devices. Such contamination may result from backflow, back-siphonage, back-pressure, and cross-connections.

Before discussing the implications of faulty plumbing designs and devices, I am going to take the liberty of defining several terms which I previously have mentioned, and will refer to again. These definitions are as included in the Report of the Co-ordinating Committee for a National Plumbing Code:—

(a) Backflow: Backflow is the flow of water or other liquids, mixtures, or substances into the distributing pipes of a potable supply of water from any source or sources other than its intended source.

(b) Backflow connection: Backflow connection or condition is any arrangement whereby backflow can occur.

(c) Backflow preventer: A backflow preventer is a device or means to prevent backflow into the potable water system.

(d) Back-siphonage: Back-siphonage is the flowing back of used, contaminated, or polluted water from a plumbing fixture or vessel into a water-supply pipe due to a negative pressure in such pipe.

(e) Cross-connection: A cross-connection is any physical connection or arrangement between two otherwise separate piping systems, one of which contains potable water and the other water of unknown or questionable safety, whereby water may flow from one system to the other; the direction of flow depending on the pressure differential between the two systems.

The subject of cross-connections has been given considerable attention and study by public health and waterworks officials. Serious water-borne outbreaks have been traced to cross-connections allowing for a non-potable water supply to enter potable water systems. In many instances the cross-connections were the result of carelessness, poor design, and ignorance on the part of the persons doing the work. Great progress has been made in eliminating cross-connections. Many of these dangerous cross-connections, after being located, were broken through co-operative action on the part of industry and governmental agencies, which in great measure was the result of the passage and enforcement of regulations pertaining to cross-connections. Some of these regulations were adopted by States, whereas others were adopted by local cities and communities. It is one thing to set up codes or regulations and another to expect enforcement without the necessary trained personnel to carry on the detailed and continuous follow-up required. However, in many communities, the work is effectively carried on, and detailed surveys and subsequent re-appraisals of conditions are made to prevent the installation of new cross-connections and to locate concealed connections which are potentially dangerous.

Back-siphonage connections, under certain hydraulic conditions, between potable water supply lines and plumbing systems may actually allow sewage or other type of contamination to enter the water lines. For example, in hospital equipment such as water sterilisers, bedpan washers, dental units, dish-washing machines, water closets and urinals with submerged inlets, connections may be installed so as to allow infectious materials to be back-siphoned into the potable water supply pipes. Submerged water line inlets to factory process tanks holding poisonous solutions may result in contamination of a potable water supply in the event back-siphonage occurs. It is not far-fetched to conceive that opportunity for sabotage may exist as a result of backflow of poisonous and contaminated solutions in industrial plants. Back-siphonage conditions may also result through the use of improperly designed fixtures, undersized or overloaded water piping or through improperly installed piping systems. Great progress has been made in the United States by plumbing fixture manufacturers in developing fixtures which will not permit back-siphonage. Design engineers and plumbers, through their organisations, have been promoting safe practices through the use of fixtures tested and approved by authorised laboratories. The control of plumbing through the adoption and enforcement of codes and regulations, and the licensing of plumbers, have also been important in this respect. Of equal importance is the need for water utilities to participate in back-siphonage control programmes. It is recognised that the responsibility of water utilities to pipe safe water does not end at the property line or building, because public water supply mains may become infected through back-siphonage connections. Local water, health and building departments are co-operating to establish co-ordinated programmes for the purpose of investigating and correcting existing dangers from backflow, and to control new installations of water and plumbing systems in buildings.

An adequate supply of potable water is essential to the maintenance of high standards of health, and to provide the conveniences demanded by modern society. A potable water is one which has the necessary qualities satisfactory for drinking, culinary and domestic purposes, and meets the requirements of the health authority having jurisdiction. In the United States of America, the generally accepted standards for a potable water are those adopted by the U.S. Public Health Service and published under the title of Public Health Service Drinking Water Standards and Manual of Recommended Water Sanitation Practice. Many localities are not served by community or private water systems and individual sources such as wells are made use of. Dual water systems, such as a safe supply system for domestic use and a contaminated or questionable supply system for sprinkling, fire protection, process or cooling purposes, are dangerous in that there are possibilities for cross-connections. In many instances specific regulations pertaining to such procedures have been formulated. In order to protect the water supply against contamination by backflow, various procedures are followed. Fixtures having under-rim water supply connections that may become submerged when the fixture is used, and fixtures having over-rim supplies with inadequate air gaps, are dangerous. The use of approved devices such as vacuum breakers and safe air gaps are made use of extensively in such instances for the purpose of preventing backflow or back-siphonage. Backflow preventers are installed between the control valve and the fixture, and in such a manner that they will not be subjected to water pressure except the back pressure incidental to water flowing. They should be installed at a minimum distance of 6 inches above the overflow of the fixture or appliance. Backflow preventives should never be installed on the inlet side of control valve. A general rule for air gaps is that the minimum required air gap should be twice the diameter of the effective opening, but in no case less than 1 inch.

The subject of properly designed drinking fountains is worthy of being given special attention. The ramifications

as to the possible spread of infection through the use of insanitary drinking fountains are many. The American Standards Association has formulated Specifications for Drinking Fountains which have been widely adopted in the United States. Reputable manufacturers of plumbing fixtures have incorporated the necessary designs in drinking fountains so that the fixtures meet the American Standards Association specifications, which are as follow :—

(a) The fountain should be constructed of impervious material, such as vitreous china, porcelain, enamelled cast iron, other metals or stoneware.

(b) The jet of the fountain should issue from a nozzle of non-oxidising, impervious material set at an angle from the vertical such as to prevent the return of water in the jet to the orifice or orifices from whence the jet issues. The nozzle and every other opening in the water pipe or conductor leading to the nozzle should be above the edge of the bowl, so that such nozzle or opening will not be flooded in case a drain from the bowl of the fountain becomes clogged. (The lower end of the nozzle orifice should be at an elevation not less than  $\frac{1}{2}$  inch above the flood level rim of the receptacle.)

(c) The end of the nozzle should be protected by non-oxidising guards to prevent the mouth and nose of persons using the fountain from coming into contact with the nozzle. Guards should be so designed that the possibility of transmission of infection by touching the guards is reduced to a minimum.

(d) The inclined jet of water issuing from the nozzle should not touch the guard, and thereby cause splattering.

(e) The bowl of the fountain should be so designed and proportioned as to be free from corners which would be difficult to clean or which would collect dirt.

(f) The bowl should be so proportioned as to prevent unnecessary splashing at a point where the jet falls into the bowl.

(g) The drain from the fountain should not have a direct physical connection with a waste pipe, unless the drain is trapped.

(h) The water supply pipe should be provided with an adjustable valve fitted with a loose key or an automatic valve permitting the regulation of the rate of flow of water to the fountain so that the valve manipulated by the users of the fountain will merely turn the water on or off.

(i) The height of the fountain at the drinking bowl should be such as to be most convenient to persons utilising the fountain. The provision of several step-like elevations to the floor at fountains will permit children of various ages to utilise the fountain.

(j) The waste opening and pipe should be of sufficient size to carry off the water promptly. The opening should be provided with a strainer.

The proper operation of a plumbing system in great measure depends upon the proper arrangement of soil, waste, vent and drain piping to provide ventilation of the system. Ventilation of the plumbing system has for its purpose the maintaining of atmospheric pressure within the system, preventing trap seal loss and preventing retardation of flow. Proper venting of a drainage system within a building is extremely important to the health of a building's occupants. It is general practice to provide water seal traps for each plumbing fixture and to protect every trap seal with a vent to prevent siphonage of the trap. The basic function of a trap on a drainage system is to form a mechanical barrier to prevent the passage of obnoxious and hazardous sewer air or sewer gas from entering the plumbing system and subsequent passage into the building. Without the necessary systems of ventilation the seal contents would have to be of considerable depth to resist variations in pressure. Various types of traps have been devised. Codes usually specify methods of venting. While it might seem needless to so specify, vents should be extended to the open air at a point above the roof level. No person skilled in the art of plumbing would do otherwise. However, the termination of vent pipes in attic spaces has been known to have occurred. In fact, some installers of plumbing ("handy men" and most certainly not qualified mechanics) have seen fit to disregard the need for providing vents. The leaders in the industry are constantly working to improve the situation by educating plumbing mechanics as to the reason and need for the various good-practice principles associated with their work. In addition, they are sponsoring and participating in programmes for acquainting the layman as to the relation between good plumbing practices and sanitary conditions of living.

Grease traps or interceptors are made use of on the waste pipes from large kitchens and similar food preparation rooms. Special forms of grease interceptors are used in connection with drainage systems from certain types of industries such as slaughterhouses, packing plants, etc. It must be remembered that the effectiveness of a grease trap is dependent on the attention it receives.

Many codes specify minimum standards as to type, quality, weight and use of plumbing systems materials. Various standards for both water supply and drainage systems fixtures and appurtenances have been promulgated by nationally recognised organisations such as the American Standards Association, American Society for Testing Materials, the American Water Works Association, and the manufacturers Standardisation Society of Valve and Fitting Industry.

The installation of gas-fired heating appliances such as hot-water heaters, is strictly regulated in many localities. For example, in the city of Chicago such devices are regulated through municipal code requirements. Gas-fired hot-water heaters may not be installed in bathrooms where there is a danger of a reduction in oxygen content of the air envelope during time periods when the device is in use. An installation requires that a vent pipe leading to out of doors must also be provided. A back-draft diverter must also be part of the venting system. Before any such device is installed, a permit must be secured. A follow-up inspection is made to ensure that the installation is safe and meets code requirements. There is close co-operation between the city departments and the gas company to ensure that no dangerous installations are made.

Faulty plumbing devices and improperly constructed water supply systems have been found to be responsible for numerous cases of infectious diseases such as typhoid fever and amoebic dysentery, which in some instances have resulted in death. Many of these devices and systems have been in use for years and their elimination or correction is a slow process in view of the fact that they must be located, and often law enforcement must be resorted to in order to rectify the objectionable conditions. Medical authorities, engineers, plumbers and manufacturers are co-operating in the programme for safe plumbing. In some metropolitan areas inspections are being made of residential, industrial and hospital installations for the purpose of locating dangerous plumbing systems and installations, and ordering corrective action to be taken. The engineering profession, through various laboratories, is conducting tests and making the results available to the plumber for his guidance. Various national, state and local organisations of plumbers and manufacturers of plumbing devices are financing research. It is not too much to expect that these co-operative programmes will do much, in time, to win the battle for good plumbing practices so necessary for promoting and protecting the health of the people.

---

At a meeting of the Illuminating Engineering Society on December 9th, to be held at the Lighting Service Bureau, 2, Savoy Hill, W.C.2, at 6 p.m., a paper entitled "Visual Fatigue" will be presented by Mr. H. C. Weston. The I.E.S. invites any of our members who may care to be present and to take part in the discussion to attend this meeting.

The Metropolitan Counties Branch of the British Medical Association is celebrating its centenary during this session, and a centenary ball will be held at B.M.A. House on Thursday, January 8th, 1953, 8.30 p.m. to 1.30 a.m., the proceeds of which will be divided among medical charities. Tickets, price 2 guineas each (or 11 guineas for a party of six), are obtainable from the Hon. Secretary, M.C.B. Centenary Ball Committee, B.M.A. House.

J. Rawlinson, Esq., M.E.N.C., M.I.C.E., M.I.M.E.C.E., Chief Engineer of the London County Council, will deliver the Chadwick Trust "Bossm Gift" Lecture on "The History of the Main Drainage of London" on Tuesday, November 25th, 1952, at 2.30 p.m. at The Royal Sanitary Institute, 90, Buckingham Palace Road, S.W.1. E. M. Rich, Esq., C.B.E., B.Sc., F.C.C.I., Chairman of the Chadwick Trustees, will preside.

## OCCUPATIONAL HEALTH IN AUSTRALIA

At the annual general meeting of the New South Wales Branch of the Society, held in Sydney on June 25th, 1952, with the President, Prof. E. Ford, in the chair, there was a symposium on the above subject, in which the speakers were Dr. C. J. Cummins, Director, Division of Industrial Hygiene, Department of Public Health, N.S.W.; Dr. G. Smith, Commonwealth Director of Industrial Hygiene, Commonwealth Department of Health; and Dr. J. C. G. Hadley, Senior Medical Officer, Australian Paper Manufacturers.

### Role of the State

Dr. Cummins said that the term "occupational health" was chosen deliberately as the title of this discussion to emphasise the necessity of co-ordinating industrial medicine and industrial hygiene with the general public health programme. It was one of the most important fields to-day in preventive medicine, and the standard of health of the industrial population of any nation was one of the determining factors in national status, prosperity and advancement.

Dr. Cummins went on to describe the formation and functions of the Division of Industrial Hygiene, which was founded in 1923 at the request of the Arbitration Court of New South Wales, because of the difficulty experienced by that Court in securing unbiased scientific and medical opinions on occupational hazards. Until World War II its activities were concerned largely with the investigation of specific industrial medical hazards, and particularly with enquiries into the incidence and causation of pneumoconiosis, the control of atmospheric conditions in textile mills, and the incidence and control of lead poisoning.

In 1939 additional staff were appointed to the Division to carry out scientific research on the problem of coal miner's pneumoconiosis and dust control in coal mines. In the same year an industrial medical clinic was established, offering a free and full diagnostic service to anyone who was suspected of suffering from diseases of occupational origin.

After World War II, with further increase of staff and provision of adequate accommodation and equipment, the Division had been able to expand its activities to incorporate the study of broader aspects of occupational health, as well as coping with routine advisory work. It exercised an overall supervision of industrial medical hazards and occupational environments throughout the State. Its services were open to all, employer and employee alike, and to cover these activities a professional staff of doctors, chemists and engineers, all specialising in industrial medicine or industrial hygiene, was maintained.

Its present activities were diverse and could be divided into several broad categories:—

(a) Routine advisory work on specific medical hazards in industry. Requests for advice of this nature were received from governmental and local government authorities, trade unions, employer organisations, and individual management. Industry was encouraged to submit its problems before instituting new processes.

(b) It acted as technical adviser to other government departments with respect to industrial health matters defined and controlled by law, as in the control of ventilation and dust suppression measures in mines under the Coal Mines Regulations Act, 1912-1947; the estimation of the efficiency of ventilation in theatres and public halls under the Theatres and Public Halls Act, 1908-1946; and the supervision of factory health in conjunction with the Department of Labour and Industry and Social Welfare under the Factory Acts.

(c) The industrial clinic was still maintained for the diagnosis and assessment of occupational disease. This clinic provided, without cost, a free diagnostic service, including pathology, radiology and specialist opinion, if necessary. The number of attendances

had increased progressively from 400 in 1940 to an estimated 1,500 in 1952.

(d) The estimation of the general health of the worker in specific industries was determined by the performance of major industrial surveys. In these surveys morbidity rates were determined by non-specific as well as specific industrial disease. It was hoped ultimately to form an estimate of the health of a cross section of industrial workers in this State, and to evaluate the influence of age, sex, social, economic and environmental factors on the incidence of many common diseases.

(e) Attempts were being made to educate industry and its technical advisers to their moral responsibilities to protect the health of the worker. This campaign had been commenced with articles in trade journals, lectures and in the larger industries by personal contact and explanation. Arrangements were being made to co-operate with the University of Technology in giving lectures to undergraduates in chemistry and engineering, and a proposal had been advanced for the establishment of a post-graduate diploma in industrial hygiene for graduates of these professions.

(f) Lastly, a brief description was given for projected research programmes by the Division on chemical, engineering and medical industrial problems.

Dr. Cummins concluded by outlining the very close liaison which was maintained by the Division of Industrial Hygiene with all the activities of the Department of Labour and Industry and Social Welfare by the medium of a special liaison officer appointed for this purpose.

### Role of the Commonwealth

Dr. Smith then discussed the Role of the Commonwealth of Australia in Occupational Health, and the co-ordination of the Commonwealth Unit with State authorities in this sphere. He described briefly the growth of industrial medicine in the Commonwealth Health Department from December, 1921, when there was established a Division of Industrial Hygiene, the first official agency of its kind in Australia, with the following two fundamental objectives:—

(a) To develop hygiene standards for industries.

(b) To develop and standardise systems of medical and surgical services.

During the economic depression, the Department of Health was reorganised, and the Division ceased to exist in April, 1932. However, in the 10 years of its operation a creditable output of work was achieved. Several investigations were carried out, in some of which the States participated, and reference to the Division's publications indicated the number and diversity of the problems that were tackled.

During the next 16 years the States Health Departments carried out, upon request, any work in regard to industrial health which the Commonwealth desired, although during the second world war the Federal Department of Labour and National Service had an industrial hygiene section, under the control of a medical officer on loan from the Commonwealth Department of Health. This section, often in collaboration with the States, made investigations into medical and scientific aspects of a number of industrial health problems.

Dr. Smith then described in detail the function of the present Industrial Medical Unit established in August, 1948, when the Federal Cabinet approved of the establishment of a Unit of Industrial Hygiene and Medicine at the School of Public Health and Tropical Medicine, University of Sydney, with the following functions:—

1. To act as a training school for medical men and others needed to carry out investigations into industrial hazards and problems of industrial hygiene.

2. As a research unit, to initiate industrial hygiene field investigations into the cause, nature and extent of industrial health hazards.

3. To advise the Government on all problems relating to disease in industry.

The Unit actually came into being in October, 1949; the present staff comprised one medical officer, and two scientific officers, all full-time.

1. *Education*.—Medical undergraduates in their fifth year now received at least six lectures relating to occupational health during the course in public health and preventive medicine. Post-graduates taking the course for the Diploma in Public Health received 25 lectures and made excursions to 15 or 16 different industries. In the last 12 months, two successful short courses in occupational medicine, of five to seven days' duration, had been held. They were primarily designed to attract general practitioners but all doctors were eligible to attend. It was hoped that some day the teaching facilities for medical students and post-graduates would be linked up with clinical medicine.

A series of lectures was given to candidates taking the Course in Industrial Nursing of the N.S.W. College of Nursing, and occasional lectures were given to other groups such as students for the Diploma in Social Studies, Hospital Tutor Sisters, and the Institute of Almoners.

Arrangements were being made for two lectures to be given to advanced students in the Department of Chemistry, and later it is hoped to do something similar in the Department of Chemical Engineering of the University.

2. *Investigational Work*.—This was a necessary function of all University departments, for educational activities could not flourish without it and there were plenty of opportunities for environmental and health surveys in a great variety of occupations. Work at present being undertaken by the Unit, which had only a small staff, related to airborne contaminants, and other projects were being planned.

3. *Advisory Service to the Government*.—Any Commonwealth authority which desired advice or an investigation concerning an industrial health problem might refer the matter to the Unit of Industrial Hygiene. Thus investigations had been made for the Postmaster General's Department (lead exposures; dust from trenching and tunnelling preparatory to the laying of telegraph cables), for the munitions establishments (dust from ferro-vanadium, oil dermatitis, exposure to trinitrotoluene), and for other departments. Information and advice on several other problems had also been given.

### The Role of Industry

The final speaker was Dr. J. C. G. Hadley, who defined the basic objectives of industrial medicine practice as:—

1. To determine the physical condition of new or prospective employees.
2. To maintain the general health of employees and to promote proper health habits.
3. To promote safe working practices and to reduce health hazards.
4. To minimise time lost through illness or injury.

He pointed out that the medical officer works in close co-operation with the personnel staff, which includes the personnel officer, employment officer, safety officer and officer in charge of welfare or pensions fund.

An adequate Medical Service required an adequate staff with proper accommodation and equipment. The requirements varied with the type of industry and the number of employees.

The medical officer's duties included:—

1. Pre-employment medical examination. In addition to the routine physical examination, a chest x-ray was desirable. In some industries, where toxic substances are handled, regular periodic examinations were made.
2. Care of industrial injuries and occupational diseases.
3. Reasonable first-aid and advice for employees suffering from injuries and illnesses not connected with their work was given if employees were fit to remain at work but, if they were unfit, they were referred to their private practitioners.

4. Education of employees in accident prevention and hygiene.

5. Elimination or control of health hazards. Hazards were found on factory inspections and control was attempted by reference to supervisory staff or management, and by the use of Safety Committees.

6. Supervision of plant sanitation, ventilation, lighting, heating, protective clothing and equipment, etc.

7. The keeping of records, which should be positive, adequate and confidential.

8. Maintaining an ethical and co-operative relationship with local hospitals and the employee's physician. Following an interesting discussion, the President moved a vote of thanks to the speakers for their interesting papers.

### CORRESPONDENCE

#### VALIDITY OF EVIDENCE OF CANCER CONTROL

To the Editor of PUBLIC HEALTH

SIR,—I read with interest in your October number Dr. McKinnon's criticism of my article in PUBLIC HEALTH, July, 1952.

It is by no means easy to argue with Dr. McKinnon because he seems to "pooh pooh" any criteria, especially figures that are unlikely to back up his own theory. He used figures, namely, mortality figures, on which to base his theory that "early diagnosis and treatment are useless" but seems to deny that any other figures are of value. For instance, he recites how much has been done to obtain early diagnosis and treatment in certain of the provinces in Canada, but when I ask for "delay figures," i.e., the average delay between the first symptom and treatment, in order to prove that early treatment has in fact been achieved in those provinces, he replies, "Consideration of these factors ['factors' being efforts to obtain early treatment] even without figures [my italics] leaves little doubt that if such early treatment were effective in reducing mortality there would have been some decline in the age-specific mortality for breast cancer." Again, later, in his letter he says the contrast between these two provinces although not written in *precise figures* (my italics) undoubtedly provide a sound basis for comparison, probably a sounder basis than *precise figures of pretreatment* (my italics) which must be, on account of their character of *dubious accuracy and comparability* (my italics).

He seems to pour doubt on all figures quoted by Prof. Smithers, and in connection with my insistence that mortality figures without incidence figures are of little value, he says in the last paragraph of his letter, "It is very difficult to see how in the present state of our knowledge reliable or comparable data on the incidence of breast cancer could be obtained, and the collection of unreliable and incomparable data would not be profitable."

Yes, it does seem that Dr. McKinnon has a great antipathy against any figures except mortality figures.

He does not seem to like the idea of "stages" as a description of how far the disease is advanced. I admit that a clinical estimate, which incidentally has nothing to do with histopathology, of the stage of the disease cannot be exact. I have never claimed that the stage of the disease is synonymous with the duration, but Prof. Smithers' figures do suggest that there is considerable parallelism between the two.

The questions for which both Dr. McKinnon and I are seeking an answer are really quite simple:—

(1) Can cancer education reduce the average "delay figure," i.e., delay between first symptom and treatment, which at present is about six months?

(2) If the delay figure can be brought down, to say one or two months, will the number of "early stage" cases be found to increase?

There is already abundant evidence that if the proportion of "early stage" cases increases the survival rate will increase.

It would appear that Dr. McKinnon believes that he already knows the answers to both questions, the first being Yes, the second No.

Although I hope and believe the answer to both questions will be Yes, I do not think it will be possible to answer them with certainty until a scientific evaluation of cancer education has been carried out on a statistical basis. Such an evaluation may take five years, but I am happy to state that there is every probability that I shall be able to start such an evaluation within the next few months. I hope that I shall live long enough to see the result.

Yours faithfully,  
MALCOLM DONALDSON.

84a, Oakwood Court,  
Addison Road,  
London, W.14.



**PUBLIC HEALTH (AIRCRAFT) REGULATIONS—AMENDMENT**  
*To the Editor of PUBLIC HEALTH*

SIR,—I feel certain that every Medical Officer of Health in the country will be putting in a very serious memorandum concerning the practical impossibility of controlling an outbreak of, say, smallpox, under conditions as set out in the Ministry's Circular 28/52.

The waiving of the regulation empowering the Medical Officer of Health of the Airport to obtain the address to which a person is going immediately upsets the present excellent arrangements for the tracing of smallpox contacts. The suggestion that this can be replaced by a message put out by the B.B.C. or in the Press is fantastic as the message may not be heard by the person or persons concerned nor may the Press notice be seen; and, if it is heard or seen, a person concerned may deliberately disregard it as he may consider that if he reports his liberty may be curtailed.

I think the new procedure is absolutely deplorable and will most definitely help in producing a country-wide outbreak of smallpox when the next virulent case arrives from India or elsewhere. What is being done about this?

Yours faithfully,

F. A. BELAM,  
*Medical Officer of Health.*

Municipal Offices,  
 Guildford.  
 September 26th, 1952.

*To the Editor of PUBLIC HEALTH*

SIR,—Circular 28/52 of the Ministry of Health has just reached me outlining the procedure for tracing of contacts of infectious disease occurring in passengers travelling by aircraft. It would appear that the Regulations for aircraft are being made analogous to those of the regulations for shipping. I was wondering if this matter has been considered by the Society and whether any representations had been made to the Minister, having regard to the much greater risk of high-speed air travel in allowing infectious persons to enter this country during the incubation period.

The procedure outlined by the Minister appears to be unnecessarily cumbersome and also liable to give rise to panic on the part of the general population.

It may be difficult to amend the Regulations owing to the agreement signed with the World Health Organisation but it should surely be possible for some information to be obtained of the intended destination of each passenger upon landing.

Yours faithfully,

W. G. BOOTH,  
*Medical Officer of Health.*

Town Hall,  
 Ealing, W.5.  
 October 3rd, 1952.

**EXCLUSION FROM SCHOOL AND NURSERIES OF CONTACTS OF INFECTIOUS DISEASES**  
*To the Editor of PUBLIC HEALTH*

SIR,—Dr. Hinden, in his address "The Changing Face of Paediatrics" reported in your October number, states: "I think that isolation of patients and quarantine of contacts wastes a lot of time, confers no permanent protection, but merely postpones trouble to a much more inconvenient moment. Would it not be far better to ignore their infectivity altogether, and to treat sufferers as one does all other patients?" More than one authority has carried out much, if not all, of the policy advocated by Dr. Hinden over a long period of years without any obvious ill-effect.

I have for many years abandoned exclusion from our schools and nurseries of contacts of all infectious diseases, with the exception of poliomyelitis, cerebrospinal fever and smallpox. (As there have been no cases of the latter two diseases, poliomyelitis was, on account of our ignorance of the spread of the disease and because of its special problems, the only one in which exclusion of contacts has been practised.) I have never had cause to regret the abandonment of exclusion. Although a watch has been kept for the outbreak of disease, for over 10 years it has not apparently led to any noticeable increase in spread. Among other advantages, it has led to a big saving in school attendance. Especially in an area where social and housing conditions are not good, I am sure it is the wisest policy.

In addition, our policy here is to "ignore" in our day nurseries such infections as mumps, rubella and chickenpox. If a child is in good health, the child can attend whether he shows signs of the disease or not. On the whole it is better for these diseases to be acquired in early childhood than in later life. In any case, we can do little or nothing about the spread of these infections.

In accordance with the rules which have been sent out to practitioners, teachers and others, officially it has been the policy to examine contacts by doctors or a nurse before return to school,

but this policy has largely broken down owing to various difficulties, yet no harm seems to have occurred in allowing the contacts immediately to attend school.

In retrospect it seems astonishing that the policy of abandonment of exclusion has had no apparent harmful consequence.

Yours faithfully,

Public Health Department,  
 Municipal Offices,  
 143, Regent Road,  
 Salford, 5,  
 November 1st, 1952.

J. L. BURN,  
*Medical Officer of Health.*

**BOOK REVIEWS**

**The Control of Communicable Diseases.** By HUGH PAUL, M.D., D.P.H. (Pp. 526. Price 55s. net.) London: Harvey & Blythe, Ltd. 1952.

Practically everyone in the Public Health Service and a good many outside it must have heard of Dr. Hugh Paul, of Smethwick, and a great number must have heard him speak. His pungent humour is always interesting, but at times it may have been too interesting, distracting the listener from the sound sense underlying his comments. Dr. Paul's new book, "The Control of the Communicable Diseases," does not suffer this disadvantage. Its every chapter bespeaks wide experience or wide reading and often both, and factual illustrations throughout give point to his arguments. In succeeding years, medical officers of health may find it harder and harder to secure the extensive personal experience in infectious disease and its control that has been possible to those of recent decades, not only because infectious disease is at present a declining quantity, but because the National Health Service Act has altered the pattern of the medical officer's work. So, too, we believe that only an M.O.H. could have written such a book and it is well that it has been done.

That a foreword has been contributed by Dr. G. S. Wilson emphasises the point well made by Dr. Paul, and with which we entirely agree, that the M.O.H. should collaborate closely with the bacteriologist of the Public Health Laboratory Service, without thereby losing his own position as the main field epidemiologist in his area. The necessity for field experimental epidemiology, of which the recent controlled trials of the Medical Research Council in new protective methods are examples, is cogently argued by Dr. Wilson.

It is difficult to classify the infectious diseases by any method other than by reference to their mode of spread and, though Dr. Paul has not followed it, few will quarrel with his classification. Many will disagree, however, we think, with his inclusion in the discussion of cancer, coronary disease, accidents in the home, road casualties and other non-communicable diseases, though to be fair, it should be stated that only cancer is dealt with in detail in the main text. The others are treated of, in an epilogue, which, interesting and stimulating though it is, is not entirely relevant. Although cancer may be due in some cases to a virus, it has not been shown to be so caused in man and it certainly cannot be regarded on epidemiological grounds to be infectious.

Throughout the book, Dr. Paul—though he does, as he says at the outset, use the work of other men, and references are liberally sprinkled through the text—shows that his mind is constantly challenging accepted concepts and practice. His practice and advice regarding school exclusions and control of contacts deserve close study by M.O.H.s and school medical officers, for his precepts have proved in his own area to be as safe as the official recommendations, and have resulted in much less dislocation of domestic life. His views on terminal disinfection are in line with modern practice though we doubt if in many areas terminal disinfection is carried out as recommended in regard to dysentery, for when it is about, Sonne dysentery is, indeed, often ubiquitous. His commentary on food poisoning and food hygiene is especially interesting and valuable in these times. He deplores the present division of care in regard to tuberculosis in a section which is thoroughly practical. The social aspects of epidemiological control are well put throughout the book, for it is clear that as ease of communication increases, the social aspects become more significant, for more and more do rural communities approximate to the urban pattern. The tale of infectious disease in its global context and in its historical bearings is fascinatingly told.

Dr. Paul does well to emphasise that the prevention of disease is not the exclusive preserve of the local health authority services. Indeed, the function of the M.O.H. is to do everything possible to ensure that prevention shall have its full place in the activity of both hospital and general practitioner work.

We are sure Dr. Paul would be disappointed if everyone agreed with all he says—indeed, we are sure individualism is what Dr. Paul most enjoys. We do not agree with his strictures on children in children's hospitals being visited by relatives, for we feel the

risk of infection has been a bugbear too long in this. We think his cautionary tale of the diphtheria carrier, quoted from one of his papers written in 1936, might have been left out, for it does not, even as a caricature, mirror current thinking among M.O.H.s and might mislead, even though it had some validity when it was written. He criticises the Public Health (Infectious Disease) Regulations, 1927, but not hard enough. The view expressed that "food poisoning notification is mainly to bring to the notice of the M.O.H. any circumstances which a general practitioner might consider to require further investigation and action which he, himself, feels to be what he cannot be expected to undertake," is, we think, unsound and, indeed, dangerous. More might have been said of social case work in venereal disease control and the difficulties in rural areas might have been discussed. To detail all that we agree with would be tedious, and we will not do it.

To sum up: this is a book well printed and easy to read, massive in scope and revealing at every turn a thoughtful, well stocked and keenly analytical mind, and illuminated by flashes—at times scintillations—of Irish wit. It is an expensive book but it is worth it, every penny.

**The Child in Health and Disease.** A Text-book for Students and Practitioners of Medicine. Edited by CLIFFORD G. GRULEE, M.D., and R. CANON ELEV, M.D. Second edition. (Pp. 1,208. Price £5 14s.) London: Baillière, Tindall & Cox. 1952.

This is a paediatric text-book written by 87 contributors and compiled with the usual American thoroughness; an exhaustive list of references is attached to each of the 100 chapters.

The Child in Health is dealt with somewhat summarily in six chapters on growth, nutrition and infant feeding and in one on adolescence. Prevention of disease does not find a place in this book, but the paediatric clinician, with time to study, will find information on modern methods of diagnosis and treatment clearly set out for all aspects of The Child in Disease. Chapters on the new-born and premature infant are commended in particular.

**The Advance to Social Medicine.** By Prof. RENÉ SAND. (Pp. 655. Price 42s.) London: Staples Press, Ltd.

Prof. Sand's great book "Vers la Médecine Sociale," now excellently translated into English, is encyclopaedic in nature as it describes successively the development of medical practice, hospitals, personal hygiene, public health and social hygiene, industrial medicine and the medical services of public assistance and the friendly societies, and finally the sciences concerning man himself. The claim that there is no book quite like it can be applied with truth to this work, which brings together the product of a most extensive research. So comprehensive is the range of Prof. Sand's thought and knowledge that those who are interested in the development of social medicine from the days of the early social welfare services and industrial medicine over 100 years ago, will find it a rich treasure house. Its theme might well be summed up in Sand's own words: "But to-day, having fertilised the soil, subjugated the elements, overcome the more devastating diseases and opened up great sources of wealth, man can cut out the roots the evils which have held him enslaved. Naked before his destiny, his spiritual value was continually threatened, his material worth as yet negligible; but the more his health and his skill can be developed, the more wealth will his productive capacity represent. It is in order to protect man, to cultivate his mental and spiritual gifts, to encourage that expansion of his personality on which individual happiness and social equilibrium alike depend, that medicine joins forces with this 'human economics,' adopts its point of view and embraces man as a whole—in the cradle, at school, at work and in the home. Social medicine is the final flowering of the preventive and curative art. It satisfies at once man's material interests, his reason, his sense of communal responsibility and that unconquerable aspiration towards a better lot on which his hopes are nourished."

A valuable feature of this work is that it gives dates of little-known historical facts and sayings. For example, the expression "social medicine" was used in 1848 for the first time by Dr. Jules Guérin, Editor of the Parisian journal *Gazette Médicale*, who appealed to the French medical profession to play a greater part in social questions. "Who, if not the doctor, will assess the causes of physical debility in the classes which have lately benefited by the destruction of privilege, and will find ways to make them healthier, stronger and happier? One great question is present to-day in all our thoughts; what will be the effects of higher wages and shorter working hours? Let us not forget the important services which doctors are called upon to render to society. At a time like this when mistrust is everywhere, we need someone to act as intermediary between factions and opposing

interests. Truly, social medicine is the key to the burning questions of this hour of regeneration."

Professor Sand has made a fine contribution of lasting benefit to the literature of our subject.

**The Life and Times of Sir Edwin Chadwick.** By S. E. FINER. (Pp. 555, three illustrations. Price 42s. net.) London: Methuen & Co. 1952.

If Chadwick were living and working to-day, one suspects that he would be regarded as the autocrat of Whitehall, or perhaps Savile Row, instead of Somerset House, which was his official home. The circumstances of his Civil Service career, however, are nearer to those of the new national boards, for the Poor Law Commission and the General Board of Health with which he spent most of his working life constantly inspired controversy about their responsibility to Parliament, the Home Secretary or the Treasury. Yet Chadwick left as great a legacy of central and local government administrative practice (including the district audit!) as did his lieutenant and successor, Sir John Simon, to the thought and method of preventive medicine.

This great Victorian originator and administrator has found a worthy biographer in Prof. Finer, whose book is not only a definitive biography but a work full of historical and social scholarship. To use the modern jargon, Edwin Chadwick's middle name was Loggerheads and Prof. Finer is peculiarly successful in bringing out the drama and bitterness of his subject's battles with his titular chiefs over the Poor Law scheme which he devised but saw frustrated, and with the Treasury, Parliament and notably the civil engineers over his sanitary plans for sewerage and water supply. He was defeated in London but laid the foundation of all subsequent environmental hygiene in the provinces. It is not to the credit of his generation that he was pensioned off at 54, whatever his defects of obstinacy and rigidity of thought.

Prof. Finer is not so successful with the medical controversies of the period nor does he take the opportunity of bringing some of the early medical officers of health into his story. But perhaps these points are outside his scheme which is to show the political and social background of Chadwick's career. This latter aim he has accomplished triumphantly and so thoroughly that this book must become a standard life of a remarkable man.

**The British Dental Annual, 1952.** Edited by EVELYN SPRAWSON, M.C., D.S.C., F.D.S., M.R.C.S., Consulting Dental Surgeon to the London Hospital. Various authors. (Pp. 262 + index, 20 pp. Price 35s. net.) London: Butterworth & Co. 1952.

This Annual is an interesting new venture which aims at giving the dental profession authoritative reviews of the state of various sections of their field, as has been done for doctors by similar publications. The authors make a distinguished list of teachers and consultants and the contents of the book are clearly a "refresher course" in modern advances in dentistry in all its aspects.

For us, however, the main item of interest must be a truly excellent article on the history, development and present situation of the School and Priority Dental Service by Mr. K. C. B. Webster, so prominent in the Dental Officers' Group of the Society of M.O.H. "Preventive dentistry," writes Mr. Webster, "as epitomised in the School and Priority Dental Service is not yet lost but it would be folly to say that it has not suffered grievously." He is convinced by the past history of pioneering in prevention carried out under local authorities that it would be regretted by senior dental officers if the system so laboriously built up were to be disturbed. He and his colleagues are certain that the needs of children are not properly met if they are left to the care of the general dental service under the N.H.S. and he gives cogent reasons, notably the greater possibility of systematic dental inspection in an organised education service. He points out also the part played by the School Dental Service in building up public confidence in conservative dentistry for children. He is interesting also in his account of the new ideas about the use of dental auxiliaries and thinks that these workers should have a position similar to that of the auxiliaries who assist the doctor, in whose case all inspection and diagnosis remains the province of the medical practitioner. Anyone who wishes to be well armed on the claims of the preventive dental service should read Mr. Webster's admirable statement.

The other chapter which will interest the Public Health Service is that on "Preventive Measures against Dental Caries" by Mr. G. J. Parfitt, F.D.S., R.C.S., M.R.C.S., of the British Post-graduate Medical Federation. He gives an excellent review of the practical measures available, fluoridation of water supplies, measures affecting food, and those on the plane of selected groups or of individual attention.

## SOCIETY OF MEDICAL OFFICERS OF HEALTH

NOTICES  
ANNUAL GENERAL MEETING

Notice is hereby given that the Annual General Meeting of the Society will be held at Tavistock House, Tavistock Square, London, W.C.1, on Thursday, December 11th, 1952, at 5.30 p.m.

## AGENDA

1. Minutes.
2. Correspondence.
3. To receive the Annual Reports of the Council, the Honorary Treasurer and the Editor of PUBLIC HEALTH for the session 1951-52; and to adopt the Balance Sheet and Income and Expenditure Accounts for the year ended September 30th, 1952 (to be published in the December issue of PUBLIC HEALTH).
4. To authorise the Council to appoint the Auditors for the session 1952-53.
5. Election of Fellows (list of candidates to be published in December PUBLIC HEALTH).
6. Nominations for the next election.

By Order,

G. L. C. ELLISTON,

Executive Secretary.

November 1st, 1952.

## SCHOOL HEALTH SERVICE GROUP

President: Dr. C. Leonard Williams (M.O.H., Barking M.B.).

A Joint Meeting with the Medical Officers of Schools Association will be held at the invitation of Dr. J. E. Underwood, President of the Association, on Friday, November 21st, at 4.30 p.m., in the rooms of the London Medical Society, 11, Chandos Street, Cavendish Square, London, W.1, to discuss: "The Prevention of Infectious Disease in Schools." Opening speakers: Dr. A. Morrison, Deputy M.O.H. & S.M.O., Derby, and Dr. R. E. Smith, late M.O., Rugby School.

A. A. E. NEWTH,

Hon. Secretary.

28, Chaucer Street,  
Nottingham.

## REPORTS

## EAST ANGLIAN BRANCH

President: Dr. K. J. Grant (M.O.H., Great Yarmouth C.B.).

Hon. Secretary: Dr. A. J. Rae (Dep. C.M.O.H., West Suffolk).

A meeting was held at Great Yarmouth on Saturday, October 11th, 1952. Sixteen members assembled at the Town Hall at 2.30 p.m. and the new President, Dr. K. J. Grant, took the chair.

The Secretary was instructed to write to Dr. V. F. Soothill and Dr. H. Roger, who had recently retired, wishing them a long and happy retirement and thanking them for their services to the Branch during the time they were Medical Officer of Health of the City of Norwich and County Medical Officer of West and East Suffolk respectively.

## Herring

The President then gave a very interesting introductory talk on "Herring—From Net to Table." He stressed that Great Yarmouth's main industry was holiday-making and that during the summer months the population of the town was trebled. The town's second industry was herring fishing and it was the premier fishing port of the world. The fishing started early in October and finished in November or December. Herring appeared off this coast during that period and were almost certainly of a different community from the shoals which arrived at other places around the British Isles earlier in the year.

The full life history was not known, but it was thought that the East Anglian herring spawned off the north coast of France in January or February and that the current then carried the herring, weakened by spawning, and their larvae bait into the North Sea. The larvae developed into the whitebait stage and resorted to estuaries such as the Thames and the Wash where they completed their development and remained for about a year. The young herring then moved out into feeding areas in the deeper waters of the North Sea where they remained for about two years. At three, sexually mature, they joined the great migration of mature herring to the French spawning grounds, swimming against the current. It was while they were on their way to the spawning grounds that they were caught, and it had been noted that there was a larger proportion of the younger herring in the early shoals.

The boats used for herring fishing were drifters of about 40 tons and the most recent addition to the fleet had cost about £40,000. They were manned by crews of 8 to 11 who lived in fairly cramped quarters aft. The nets were stowed in the hold where later fish were tipped. Each net was roughly

35 by 18 yards and the mesh was about 1 inch. Some 71 to 101 nets, always an odd number as fishermen are superstitious, were joined together and paid out in a two-mile line across the tide. They were kept vertical by corks and pallets (canvas balloons inflated by air) attached to their upper edges and heavy manilla ropes attached to their lower edges. The boats left the harbour in the morning or early afternoon (except on Sundays when the Scottish boats did not start until midnight), steamed to the fishing grounds some 25 miles away, and returned the following morning with their catch.

At the fish quay the fish were shovelled into maunds, quarter cran baskets holding approximately 250 fish. A crane lifted the maunds over lorries by the quay side and the fish were tipped straight into boxes, covered with salt, ice and a lid, and transported to traders in various parts of the country. If the catch was larger than could be sold fresh, the various processors each received an allocation and the fish were taken in baskets to the factories by the quay side. The biggest catches occurred during the full moon, the record catch for one drifter in one day being 3034 cran. Yarmouth's record catch for one night was 44,800 cran, that is, about 45,000,000 fish, and was set up in 1908.

The Branch proceeded to the Hall Quay where many drifters, mainly from Fraserburgh and Peterhead, were moored. Members went aboard and saw the nets, the galley and crew's quarters and asked many questions of the crew. They then adjourned to the fish quay and saw the auction market where fish were being loaded into boxes for the fresh market, and into baskets to be driven to the processing factories.

A short visit was paid to the Birds Eye Quick Freeze Factory where the herring were being placed in trays, put into freezing chambers for about an hour, taken out as hard blocks of frozen herring and packed in cardboard boxes. These remained in the cold storerooms often for many months before being sent in large refrigerator containers to the shops. Members hurried on to the open gutting sheds where the herring were gutted by women, traditionally Scottish but now mainly Irish, and packed with salt into deep barrels. There is little sale for these pickled herring in England; before the war they went to Russia, but now their chief market is Czechoslovakia. At another factory the Branch watched the curing of red herring, silver herring and bloaters. A basketful of fish and a measured quantity of salt were shovelled together and cast into an enormous pit where they remained for periods varying between a few hours and several days. The fish were then strung on to wooden slats, which were hung on to high wooden frames in the smoking chamber, on the floor of which fires of various materials such as oak chips and sawdust were lighted. The Branch visited one of the factories which cures kippers by smoking only, and without the aid of dye. Here a machine was seen which split the herring down the middle of the back and removed the guts.

The Branch then adjourned to the Star Hotel for tea, during which a very hearty vote of thanks was passed to Dr. Grant for a most interesting and instructive afternoon, and also for the box of kippers and bloaters which he had presented to each member present.

It was decided that the next meeting should be held, if possible, on January 17th, 1953, and that the subject should be left to the President and the Secretary to arrange.

## HOME COUNTIES BRANCH

President (1951-52): Dr. F. G. Brown (M.O.H., Wanstead and Woodford M.B., and Area M.O., Essex C.C.).

Hon. Secretary: Dr. J. Maddison (M.O.H., Twickenham M.B., and Area M.O., Middlesex C.C.).

Friday afternoon, September 12th, 1952, will long be remembered in the history of the Branch. By kind invitation of Lord Waverley, Chairman of the Port of London Authority, some 88 members of the Branch, including their friends, visited places of interest controlled by the Port of London Authority.

The party was received on board the sailing yacht *St. Katharine* by Mr. Malone, who acted as our guide, and at 2.15 p.m. we began our journey down the busy waterways of the Port of London Authority. Mr. Malone gave us a wonderful commentary on the activities of the riverside as we sailed along and showed us places of historical and present-day interest. Dr. A. M. Lawrence-Smith, Medical Officer, Port of London Authority, gave us an account of the medical side of the Authority's work. During the 10-mile journey down the river we were entertained to tea on board. On the return journey we sailed into the Royal Docks and saw the great liners discharging and loading their cargo.

Every member expressed his or her great enjoyment of the trip and their interest in learning something of the extent of the activities and responsibilities of the Authority, of which many of us were quite ignorant. All agreed it was one of the best outings we have ever had.

### NORTH-WESTERN M. & C.W. AND S.H.S. SUB-GROUPS

*President (1951-52):* Dr. Gladys Wilkinson (A.S.M.O., Cheshire).

*Hon. Secretary:* Dr. E. M. Jenkins (Sen. M.O., S.H.S., Manchester C.B.).

A meeting of the above Sub-groups, attended by 42 members, was held in the Gas Showrooms, Manchester Town Hall, on Friday, May 23rd, at 5 p.m. Dr. J. A. Fraser Roberts, of the London School of Hygiene and Tropical Medicine, gave a lecture on "The Trend of National Intelligence."

Dr. Fraser Roberts was introduced by the President, who said it was a great honour that he should come to address them.

Dr. Roberts then gave a most interesting talk illustrated by a large number of explanatory lantern slides. A considerable amount of the information given was the result of Dr. Roberts' part in the survey of national intelligence done a year or so ago in Scotland. It would appear that the trend was towards normality and that this country need have little fear of deterioration of the intelligence of its inhabitants.

A lively discussion followed and some awkward questions were asked about the types of intelligence test used and their comparative value with those used in tests taken many years ago.

Dr. Burn, after referring to a few of the points, proposed a vote of thanks which was very heartily supported.

The Annual General Meeting of the joint sub-groups was held on Friday, June 27th, at the Church's Mansions Hotel, Nantwich. The President and 11 other members were present.

Dr. Margaret Sproul, Medical Officer in the Maternity and Child Welfare Department, Salford, was unanimously elected for the presidency, Dr. Gladys Wilkinson, the retiring President, as Vice-President, and Dr. Jenkins was re-elected Hon. Secretary. The election of members of the Group Committee was then considered and all the present members were re-elected. For one vacancy Dr. Caroline Crystal was elected without dissension.

The election of representatives of the sub-group to the parent bodies was then considered and the Secretary announced the receipt of Dr. Knight's resignation on the Maternity and Child Welfare Group Council. The name of Dr. B. M. Butters was elected to fill the vacancy thus caused and Dr. Sproul was re-elected.

Drs. Wilkinson and Jenkins were re-elected as representatives on the Council of School Medical Officers Group.

The Committee of the Joint North-Western Sub-Groups for the ensuing session will, therefore, be the President, Vice-President, the Hon. Secretary and Drs. Butters, Bennett, Crewe, Crystal, Keddie, Knight, Walker, Kane.

A short discussion followed on the programme for the next season and suggestions were made that one meeting might be held for a change in Liverpool and similarly one in Chester. The date of the next meeting was agreed as October 24th.

The main item on the agenda of the Annual Meeting was a visit to the Trufood Company's Creamery and Laboratory at Wrenbury, near Nantwich. Thanks to the generosity of the company, the members were entertained to lunch at the Church's Mansions Hotel prior to the business meeting. After the conclusion of the meeting the party, which was then accompanied by one or two other members who were unable to accept the company's hospitality to lunch, proceeded by road, under the direction of representatives of the company, to the factory some three miles away. Upon arrival the members were divided into groups and guided on a tour by different members of the company's staff. The first department to be inspected was the laboratory. Here a short talk was given to the members on the manufacture of Humanised Trufood.

Subsequently each group toured the other departments in the factory, saw the cheeses which were made as a by-product and the various baby foods which were the main product of the firm.

Finally, to both groups, a short talk and demonstration was given by Mr. Kingcross, with whom the arrangements were made, on the chief merits of Trufood with particular reference to its great advantages over many others, more especially National dried milk. This talk was illustrated by chemical experiments showing the indigestible nature of the curd in cow's milk and dried milk, and the obvious advantages of human milk and re-constituted Trufood. The demonstration was so dramatic as to be almost suggestive of "sleight of hand," and caused considerable amazement and amusement among the members. At the conclusion of this talk the party returned to Church's Mansions Hotel where once again, thanks to the generosity of the company, a very excellent tea was provided.

At the end of the meeting the President and other members of the Sub-Groups thanked Mr. Kingcross and his colleagues,

and through them the company, for a most interesting and enjoyable meeting and for their generosity in providing such an excellent meal.

### ESTIMATE OF FUTURE BIRTHS

The quarterly estimate of the numbers of live births to be expected in England and Wales as a whole during the six months October, 1952, to March, 1953, has been announced by the Registrar-General.\*

The final estimate for the December quarter is 158,000 and the provisional estimate for the March quarter, 1953, is 170,000, giving an estimated total of 328,000 babies in the six months.

There were 153,995 live births registered in the December quarter, 1951, and 173,503 in the March quarter, 1952—a total of 327,498.

In the week ended October 25th there were 7,061 live births registered in the 160 Great Towns of England and Wales compared with 7,320 in the previous week. This brings the total in those towns from the beginning of the year to 328,915 compared with 338,618 in the same period last year.

### THE ROLE OF G.P.s IN THE HEALTH SERVICE

An indication of the lines on which general practice should be encouraged to develop in helping to solve some of the problems confronting the National Health Service was given by the Minister of Health (Mr. Iain Macleod), when he addressed the annual meeting of the Executive Councils' Association at Scarborough on October 2nd.

The Minister referred to some of the questions which demand an early answer, such as whether the demands on hospitals cannot be reduced without detriment to the patient, whether general practice is as well organised as it might be, and whether hospitals provide sufficiently for general practitioners. These questions concerned both the medical profession and also a wider circle, including the administrative machine of the Service, the Executive Councils and their partners, the hospitals and local authorities, as well as the other professions in the Service. The result was that many people were thinking about the future of general practice within the framework of the National Health Service.

Trends which should be encouraged, said the Minister, were:—

(1) Full co-operation between the general practitioner and the local authorities' domiciliary services to relieve the pressure on beds by ensuring that patients do not spend time unnecessarily in hospital.

(2) An increase in the number of partnerships and the development of practice by groups of doctors working together as teams.

(3) A better distribution of doctors so as to avoid doctors having more patients than they can care for properly.

(4) Closer association between family doctors and the hospitals, including contact with the doctor's own patients in hospital and direct access to x-ray and pathological departments.

(5) The family doctor becoming the leader of a team comprising all the services provided by the local health authority according to the needs of the patient.

(6) Closer co-operation between doctors, dentists, opticians and chemists working under the Executive Councils.

"With all the recent advances on the scientific side of medicine, hospital treatment has become so elaborate and so expensive that it is imperative to reserve it for patients who really need it and can benefit by it," said Mr. Macleod. "Patients ought not to be sent into hospital unless they need an investigation or other treatment which can only be given to them as in-patients, or their homes or other social circumstances make it essential for them to be admitted where purely medical needs may not."

If these principles were maintained, he considered the clinical interest of general practitioners' work would be greatly increased.

Patients should be discharged from hospital as soon as they could be satisfactorily looked after at home, though it might be necessary for out-patient treatment to continue. Primary responsibility for maintaining this principle rested on the hospitals, but it would only be possible for the hospitals to give effect to it if they could rely on a strong general practitioner service working in the closest co-operation with the domiciliary services provided by the local health authorities to give the patient all the care he needs on discharge.

"If patients are sent to hospital only when necessary and discharged as soon as their condition permits, a very great inroad

\* The Registrar-General's Weekly Return No. 43, 1952. H.M.S.O., price 1s. net (or by post from P.O. Box 569, London, S.E.1, price 1s. 1½d.).

(Continued on page 26)



TUBERCULOSIS EDUCATIONAL INSTITUTE

**REFRESHER COURSES**IN  
1953**Preliminary Announcement**

Provisional arrangements have been made for three T.E.I. Refresher Courses in 1953.

**April 14th to 17th: LONDON**

Concurrent lectures for Doctors, Health Visitors, Nurses, Social Workers and Administrators.

**May 11th to 19th: PARIS**

(In collaboration with the Comité National de Défense contre la Tuberculose). For Doctors only.

**September 1st to 4th: CAMBRIDGE**

For Doctors only.

Please address all enquiries to the Secretary

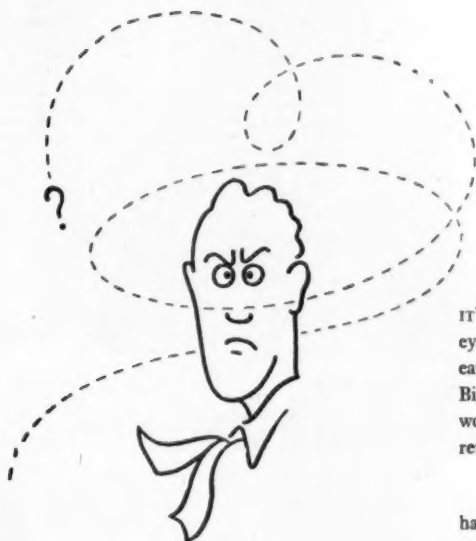
**Tuberculosis Educational Institute**Tavistock House North, Tavistock Square,  
London, W.C.1.**UNSEWERED AREAS**

"RACASAN," an entirely new, patented fluid, has been specially formulated for use in pail and chemical closets. It is odourless in use, germicidal and an active deterrent to flies. It has a unique cleansing action on the interior of the closet, is non-corrosive, not scheduled as a poison and has no flashpoint.

Scientific reports and opinions which fully substantiate our claims are contained in our book, "Unsewered Areas—A new contribution to the problem," which may be obtained on request to our Technical Division. Our Advisory Service is available to help in Sanitation and Hygiene problems and will welcome your enquiries.

RACASAN  LIMITED*Specialists in Sanitation and Hygiene*CRONWELL ROAD, ELLESMERE PORT,  
CHESHIRE,

also at LONDON and LIVERPOOL.

See our exhibit at the Building Centre, 26 Store Street,  
London, W.C.1

IT'S QUITE A PROBLEM . . . this business of keeping a watchful eye on the dangers of infection and cross-infection in public eating and drinking places. And a responsibility too. Big trouble may break out anywhere. . . Might help the worried Medical Officer of Health or Sanitary Inspector to remember that

**DEOSAN LIMITED**

have evolved specific products and routines for ensuring true bacteriological cleanliness of eating and drinking utensils, ice cream plant and serving equipment. A phone call or a note in the post will bring you a lot of help.

DEOSAN LTD., Catering Hygiene Division, 345 Gray's Inn Road, London, W.C.1. (One of the Milton Group of Companies).

could be made on the waiting lists which for some conditions could probably be made to disappear," said the Minister. "Moreover, it would often be of positive benefit to the patient. Many patients—particularly old people and children, who fret when away from home—are far better at home in the care of their own doctors or receiving treatment from hospital as out-patients backed by all the ancillary domiciliary services. Home conditions must, of course, be suitable for home-care, and bad housing and overcrowding will unhappily still take time to eliminate, despite the immense concentration of effort being applied to solving the housing problem."

On the organisation of general practice, the Minister remarked that a committee under the chairmanship of Prof. Sir Henry Cohen was considering this matter in relation to the National Health Service, but it was clear that present trends seemed to favour the development of group practice on various lines. Partnerships, the basis of all group practice, should be greatly facilitated and encouraged by the Working Party's recommendations for the distribution of general practitioners' remuneration following the award by Mr. Justice Danckwerts, and many doctors had gone further by evolving a fine type of group practice involving the practitioners working together as a professional team from specially adapted and improved premises, with some degree of specialisation among the partners and full ancillary help. New forms of group practice should also be evolving in the experimental health centres which had been opened.

Although the optimum size of lists of patients was not yet clear, some lists at present were too large for the proper care of patients. The Danckwerts' Award and the Working Party's new distribution scheme, which would reduce the normal maximum size of a doctor's list of patients from 4,000 to 3,500 should lead to a much better distribution of general practitioners in relation to the spread of the population to be served.

Under the Danckwerts' Award, total remuneration would keep pace with the number of doctors. When a good distribution had been secured, the Ministry and the profession would have to agree as to the proper rate of entry into general practice and arrangements would have to be made to link remuneration to that rate. "The Exchequer," said Mr. Macleod, "clearly cannot finance an unlimited increase in the number of doctors beyond the point at which the best practicable distribution can be secured consistent with the proportion of the national resources that can be devoted to this purpose."

Mr. Macleod considered patients should receive better care by all these developments, not alone from the better equipment and better premises which they should bring, although one had to admit that from the angle of the patient some surgeries were quite inadequate. "I am sure the profession will be the first to wish to put this right," he said. "Group practice should also benefit the doctor, who should have easier access to colleagues' opinions, better equipment and premises and a more reasonable life, with better provisions for time off and holidays."

In the Minister's view, there should be a much closer association between general practitioners and the hospitals. General practitioners should be able to expect the hospitals to help them by keeping them in touch with their own patients. Consultants and hospital staffs should be prepared to do what they could to let general practitioners have access to their patients in hospital, to keep them informed of progress and on discharge and to discuss cases with them. General practitioners should have prompt notice of discharge and any necessary clinical details, which in cases requiring continuity of care should be given in advance. Hospitals could also help family doctors by inviting them to attend clinical meetings and by developing the already increasing provision for direct access to x-ray and pathological departments. Last year nearly 700,000 pathological specimens were examined for general practitioners in hospital laboratories on direct reference and nearly 700,000 x-ray examinations were done for them. "We shall not feel satisfied till all general practitioners have direct access to these departments," said Mr. Macleod.

General practitioners in the smaller towns and rural areas (and some others) in his opinion should be able to have charge of those of their own patients who do not need specialist care but need admission to hospital, and selected general practitioners should hold specific posts of various kinds part-time. These might be of a general character, for example where they act as a medical officer of a convalescent home or take the place of residents or registrars, or they might be of a specialist character where they can act as assistants to consultants. These specialist posts might provide an opportunity for a general practitioner to become a specialist himself.

Of the general practitioner's relations with the local health authorities' services, Mr. Macleod said that in the years leading up to the National Health Service the local authorities had been the main providers of services such as maternity and child welfare, which might perhaps with greater advantage have been provided

by a family doctor in the full sense of the word. For various reasons general practitioners were not then in a position to act always as full family doctors, much as many wished to do so. The National Health Service had brought this aim within their grasp. Without in any way infringing on the administrative responsibilities of the local health authority's officers, the general practitioner could be the clinical leader of a team which comprises all the services provided by the local health authority according to the needs of the patient. This position was fast being reached in maternity work and it was capable of further development.

"A great opportunity is open to the medical officer of health as the chief organiser of these services," said the Minister. "He must be in the closest possible contact with the general practitioners and should either be a member of the Executive Council or should attend the Council's meetings. The midwife, the district nurse and the health visitor should all in time work together with the general practitioner as members of the same clinical team, and only if this takes place can the patient receive in his home the co-ordinated care from a team of workers in their different spheres which he receives in hospital."

The general practitioner should also be able to take a larger share in the medical work at local health authority clinics. "The relationship of the general practitioner and the local health authority should be a two-way relationship for mutual help," he said. "Just as the medical officer of health can put the valuable resources of the local health authority at the disposal of the general practitioner, so the general practitioner can help the medical officer of health with information as to the incidence of disease and accidents in his practice, and thus contribute to the study of morbidity in the district on which all preventive work should be based."

Lastly, he hoped to see the general practitioner of the future working more closely with the professions giving the other services for which Executive Councils are responsible. Many problems of general health were the common province of doctor and dentist, the advantages of close co-operation with chemists could hardly be overstressed at a time when general practitioners' prescribing was costing approximately one-tenth of the total cost of the Health Service, and there were obvious advantages in the closest co-operation between family doctors and opticians, who should at once let the family doctor know if anything came to their notice when testing a patient's sight which suggested that he required something more than spectacles.

## OFFICIAL NOTICES

### CITY AND COUNTY OF BRISTOL

#### DEPARTMENT OF PUBLIC HEALTH

Applications are invited for the post of Chief Assistant Medical Officer. Duties are mainly administrative and the successful applicant will be responsible under the direction of the Medical Officer of Health for the supervision of the Mental Health Services, Housing, some Epidemiology and Immunology and the medical examinations of Corporation staff and such other duties as are assigned to him.

The whole of his time must be devoted to his duties and he will not be allowed to engage in private practice. Applicants must possess the Diploma of Public Health or a similar State qualification and must have had practical experience in public health work. The appointment will be supernumerary and the appointee will be required to pass a medical examination.

Under the present grading scheme the salary will be £1,350 by £50 to £1,700.

Applications, to be made on forms to be obtained from the undersigned, should be submitted before November 29th, 1952. Canvassing directly or indirectly will disqualify.

R. H. PARRY,

Medical Officer of Health.

Central Health Clinic,  
Tower Hill,  
Bristol, 2,  
October, 1952.

**Public Health** is the Official Organ of the Society of Medical Officers of Health and a suitable medium for the advertisement of official appointments vacant in the health service. Space is also available for a certain number of approved commercial advertisers' notices. Application should be made to the Executive Secretary of the Society, at Tavistock House South, Tavistock Square, W.C.1.

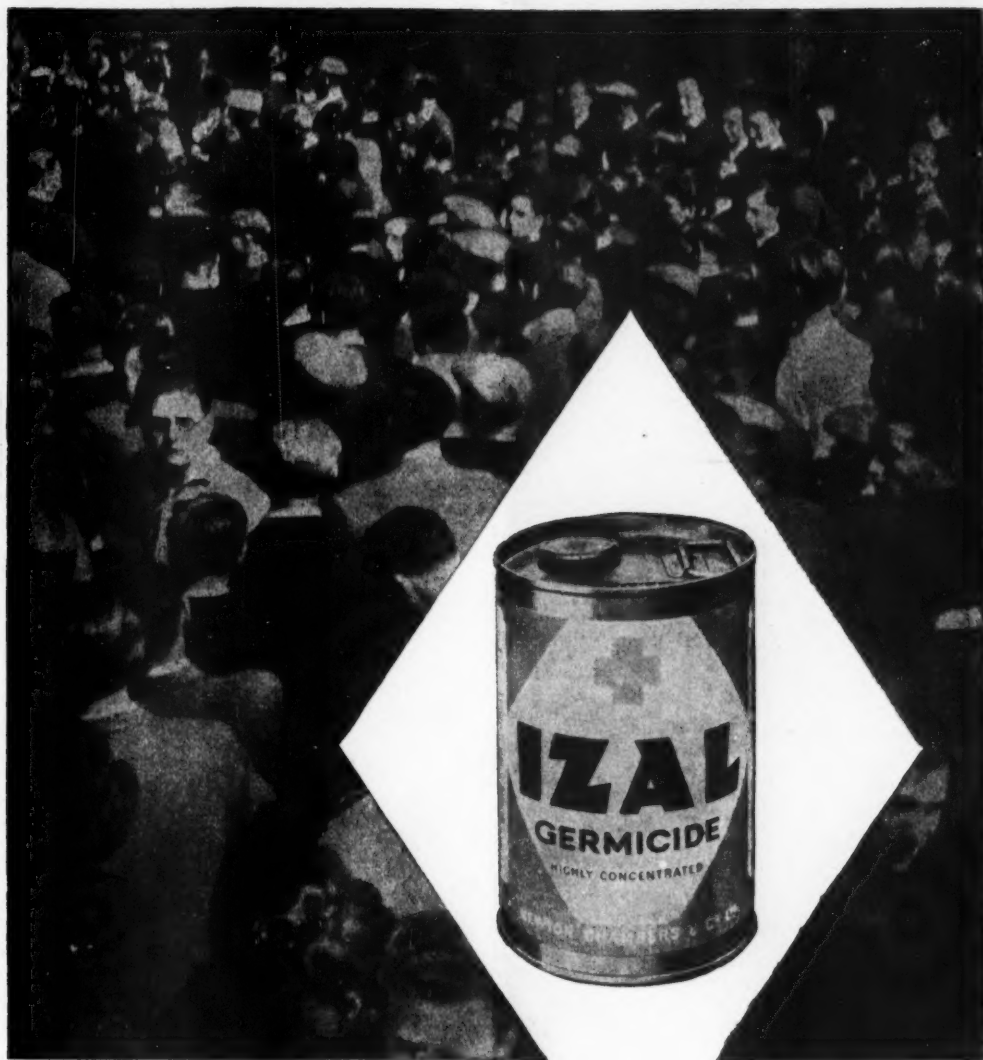
Subscription 31s. 6d. per annum, post free, in advance.

Single copies 2s. 6d. post free.

Official classified advertisements are charged at 3s. 6d. per line or part of a line. Minimum charge 20s.

Telephone: Euston 3923.

Telegrams: Epidaurus, Westcent.



**Safeguarding public health**—to protect people in public places from the risk of infection, hundreds of Local Authorities throughout the country regularly use IZAL Germicide.

NEWTON CHAMBERS & COMPANY LIMITED, THORNCLIFFE, SHEFFIELD

---



ORIGINAL CONTAINERS OF ANTI-DIPHTHERITIC SERA, AND FREE ANNOUNCEMENT OF 1895

## Leadership

IN 1894, the year of Roux's classical paper on the serum treatment of diphtheria, The Wellcome Research Laboratories were founded and produced the first commercially issued antitoxins. This, the initial step on a path of ceaseless research, led to the special process of serum refinement and concentration evolved in 1939 by workers in these Laboratories.

TODAY, this process is universally recognised as *the* method for preparing antitoxic sera. The final product, consisting of a solution of enzyme-refined globulins, contains the minimum amount of non-specific protein. All 'Wellcome' antitoxic sera for human use are made by this process. In addition they are subjected to exhaustive tests for potency and purity before issue.

The following 'WELLCOME' brand ANTITOXIC SERA are available: DIPHTHERIA ANTITOXIN, GAS GANGRENE ANTITOXIN (perfringens), MIXED GAS GANGRENE ANTITOXIN, TETANUS ANTITOXIN, STAPHYLOCOCCUS ANTITOXIN, STREPTOCOCCUS ANTITOXIN—SCARLATINA.

## 'WELLCOME' REFINED ANTITOXIC SERA

PREPARED AT THE WELLCOME RESEARCH LABORATORIES

SUPPLIED BY

BURROUGHS WELLCOME & CO.



(THE WELLCOME FOUNDATION LTD.) LONDON

ASSOCIATED HOUSES: NEW YORK MONTREAL SYDNEY CAPE TOWN BOMBAY SHANGHAI BUENOS AIRES CAIRO